



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,095	08/29/2003	Norio Iida	023971-0301	7725

22428 7590 04/07/2006

FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

NGUYEN, THU V

ART UNIT	PAPER NUMBER
----------	--------------

3661

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/651,095	IIDA, NORIO	
	Examiner	Art Unit	
	Thu Nguyen	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ²3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 8-15 and 17-20 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) 6, 7 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/29/03</u> . | 6) <input type="checkbox"/> Other: _____ |

Ex Parte Quayle

1. This application is in condition for allowance except for the following formal matters:

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be within the range of 50 to 150 words. **It is important that the abstract not exceed 150 words in length** since the space provided for the abstract on the computer tape used by the printer is limited.

3. The specification (including the abstract and claims), and any amendments for applications, except as provided for in 37 CFR 1.821 through 1.825, must have text written plainly and legibly either by a typewriter or machine printer in a nonscript type font (e.g., Arial, Times Roman, or Courier, preferably a font size of 12) lettering style having capital letters which should be at least 0.3175 cm. (0.125 inch) high, but may be no smaller than 0.21 cm. (0.08 inch) high (e.g., a font size of 6) in portrait orientation and presented in a form having sufficient clarity and contrast between the paper and the writing thereon to permit the direct reproduction of readily legible copies in any number by use of photographic, electrostatic, photo-offset, and microfilming processes and electronic capture by use of digital imaging and optical character recognition; and only a single column of text. See 37 CFR 1.52(a) and (b).

Specifically, the application papers are objected to **because the written text on pages 1, 12, 23, 25 of the specification; pages 42, 47-48 of the claims are typed in too small font, and in some pages (such as pages 23, 25, 42, 47-48) the text are not presented in portrait orientation.**

A legible substitute specification in compliance with 37 CFR 1.52(a) and (b) and 1.125 is required.

Drawings

4. The drawings are objected to because fig.11B is drawn too closed to fig.11A. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 6-7, 16 are objected to because of the following informalities:
- a. In claim 6, lines 20-21, the claimed “, by forcing the main cam axially against the main clutch” should be deleted to improve readability; further the limitation has been stated in lines 5-6 of the claim.

- b. In claim 7, lines 10; and claim 16, line 4, the claimed “the front and right wheel speeds” should be corrected to “the front left and front right wheel speeds”, to correspond to the details disclosed in page 19, line 9 of the specification.

Allowable Subject Matter

6. Claims 1-20 are allowed over prior arts.

7. The following is an examiner’s statement of reasons for allowance:

Prior art of record does not disclose a driving force distribution control system having a friction clutch for delivering driving force delivered to primary drive wheels and secondary drive wheels at a distribution ratio; the system comprises a four wheel drive vehicle controller which comprises a torque threshold value setting section that sets a lower limit torque as a predetermined torque threshold value; an input torque past history condition decision section that determines whether a clutch input torque has been greater or equal to the predetermined torque threshold value when a command torque for the friction clutch is greater than or equal to the predetermined torque threshold value during a time period from when the command torque begins to rise from a zero torque level to a current execution cycle; a command torque condition decision section that determines whether a current value of the command torque produces at the current execution cycle is greater than or equal to the predetermined torque threshold value; a reversal-of-torque decision section that determined whether an input direction of torque inputted into the friction clutch is reversed; a countermeasure-of-noise command torque calculation

section that calculates a countermeasure-of-noise command torque by decreasingly compensating for the current value of the command torque when the past history condition, the command torque condition and the reversal-or-torque condition are all satisfied; a clutch command torque control section that outputs a command signal corresponding to the countermeasure-of-noise command torque to the friction clutch when all the past history condition, the command torque condition and the reversal-of-torque condition are all satisfied.

Remarks

Elected species 1 including claims 7, 16 together with the generic claims 1-6, 11-15, 20 have been examined. Due to the allowability of the independent claims 1, 11, and 14, the restriction requirement to the species 2 and 3 (claims 8, 17, 9-10, 18-19) has been withdrawn. Claims 8, 17, 9-10, and 18-19 have been jointly examined and have been indicated as allowed over prior arts herewith.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.


A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (571) 272-6967. The examiner can normally be reached on T-F (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 31, 2006


THU V. NGUYEN
PRIMARY EXAMINER